

REMARKS

This application has been carefully reviewed in light of the final Office Action mailed November 16, 2007. Claims 1-20 are pending. Applicant amends Claims 9 and 17. The Office Action rejects Claims 1-20. Applicant respectfully requests reconsideration and favorable action of all pending claims in view of the following remarks.

Section 112 Rejections

The Office Action rejects Claim 1 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action rejects the previously presented limitation of “**a second frame**” in Claim 1, asserting that “[t]he original specification filed 12/30/2003 makes very clear that the histogram module operates upon a *first frame*, and only a *first frame* while collecting data received by the control module” (Office Action, page 3) (emphasis original). The Office Action further rejected the previously presented limitation of “a processor capable of determining a first and . . . **a second position of the adjustable aperture based at least in part on the first position**,” asserting that “the specification makes clear that only a single target aperture position was considered by applicant upon filing the original disclosure.” *Id.* Applicant respectfully traverses these rejections for at least the reasons given below.

Claim 1 is allowable at least because Applicant’s specification supports “a histogram module operable to collect data associated with a first frame **and a second frame** of a signal received by the control module.” For example, Applicant’s specification describes one embodiment having “**a memory capable of storing at least . . . a current background bin number, and a prior background bin number**” associated with respective frames (page 16, lines 6-11) (emphasis added). In addition, Applicant’s specification states that, “[i]n some cases, aperture 26 can vary the brightness and contrast of the projected image on a frame-by-frame **or a multiple frame basis**” (page 9, lines 4-6) (emphasis added). For at least the above reasons, Applicant’s specification supports the previously presented limitation of “a histogram module operable to collect data associated with a first frame and a second frame of a signal received by the control module, the histogram module comprising a plurality of bins capable of counting a first and a second plurality of pixels associated respectively with the first and second frames, wherein the first and second plurality of pixels each comprise a respective maximum intensity component at a particular color level,” as recited in Claim 1.

Claim 1 is also allowable at least because Applicant's specification supports "a processor capable of determining a first and . . . **a second position of the adjustable aperture based at least in part on the first position.**" For example, Applicant's specification discloses some embodiments that may use multi-frame bin data to determine **multiple positions** of an adjustable aperture. *See, e.g.*, page 17, lines 31-34 ("In this particular embodiment, processor 206 also determines the rate at which the aperture moves based at least in part on the frame content of the current frame and the previous frame."); *see also* page 18, lines 16-22 ("If processor 206 determines that the magnitude of the difference between the current and prior background bins is greater than a threshold value, then processor 206 determines that a background change has occurred and a maximum 'step size' is appropriate."); *see also* (emphasis added); page 19, lines 16-19 ("In various embodiments, processor 206 can implement small 'step sizes' that allow the aperture to reach its target position over several frames (e.g., 120 frames or more).). For at least these additional reasons, Applicant's specification supports "a processor capable of determining a first position of an adjustable aperture based at least in part on at least a portion of the data collected by the histogram module, and a second position of the adjustable aperture based at least in part on the first position, the processor further capable of determining a gain to apply to the second frame of the signal based at least in part on the second adjustable aperture position," as recited in Claim 1. Favorable action is requested.

Section 102 and 103 Rejections

The Office Action rejects Claims 1-3, 5, 7-9, 11, 17-18, and 20 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2002/0105621 A1 to Kurematsu ("Kurematsu"). The Office Action rejects Claims 4, 10, and 14-15 under 35 U.S.C. 103(a) as being unpatentable over Kurematsu in view of U.S. Patent No. 5,745,808 to Tintera ("Tintera"). Applicant respectfully traverses this rejection for at least the reasons given below.

Claim 1 is allowable at least because Kurematsu fails to disclose, teach, or suggest, "a processor capable of determining a first position of an adjustable aperture based at least in part on at least a portion of the data collected by the histogram module, **and a second position of the adjustable aperture based at least in part on the first position,** the

processor further capable of determining a gain to apply to the second frame of the signal based at least in part on the second adjustable aperture position.” The Office Action relies on paragraphs 0074, 0080, and 0082, 0084, and 0098 of *Kurematsu* in rejecting Claim 1, but this reliance is misplaced. In particular, the Office Action asserts “it becomes clear that *Kurematsu* discloses a plurality of adjustable aperture positions, each new position for a given image frame necessarily responsive to, and dependant upon, the previous aperture position” (Office Action, page 5). The paragraphs cited by the Office Action, however, merely disclose controlling the amount of projection light in conformity with the maximum luminance level of **a single frame**, which does not constitute “a processor capable of determining . . . **a second position of the adjustable aperture based at least in part on the first position.**”

For at least these reasons, Claim 1 is allowable, as are all claims depending therefrom. Favorable action is requested.

Claim 9, as amended, is allowable at least because *Kurematsu* fails to disclose, teach, or suggest, “**adjusting a rate at which to move the aperture** based at least in part on a current background storage module and a magnitude of a difference between the target aperture position and a current aperture position.” In contrast, *Kurematsu* merely discloses adjusting the aperture of the movable stop means 20a from a starting stage to an ending stage (paragraphs 0079-0080), without disclosing anything about “**adjusting a rate at which to move the aperture** based at least in part on a current background storage module and a magnitude of a difference between the target aperture position and a current aperture position.”

Claim 9 is also allowable at least because *Kurematsu* fails to disclose, teach, or suggest, “determining a target aperture position based at least in part on **a parameter associated with a number of clipped pixels** and data stored in a histogram.” The Office Action relies on the histograms of FIGURES 4A through 5B and on paragraphs 0074 and 0082 to teach the above limitation, but these portions of *Kurematsu* fail to disclose, teach, or suggest anything about a “parameter associated with a number of clipped pixels,” as claimed. In particular, the Office Action asserts that the “histogram-based luminance determination as disclosed by *Kurematsu* . . . necessarily accounts for any input pixels that may be ‘clipped’” (Office Action, page 15), but this is incorrect at least because the number of clipped pixels, if

any, may vary independent of the maximum luminance percentage of *Korematsu*. Moreover, *Korematsu* fails to disclose anything about “a number of clipped pixels,” as claimed.

For at least the above reasons, Claim 9 is allowable, as are all claims depending therefrom. Favorable action is requested.

Claim 17, as amended, is allowable at least for some of the reasons that Claim 9 is allowable. In particular, Claim 17 recites “a processor capable of adjusting a rate at which to move an adjustable aperture based at least in part on a target aperture position and a current aperture position,” which is not disclosed in *Kurematsu*. For at least this reason, Claim 17 is allowable, as are all claims depending therefrom. Favorable action is requested.

CONCLUSION

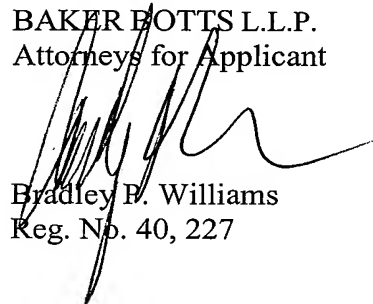
Applicant has made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicant respectfully requests full allowance of all pending claims.

If the Examiner believes that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact the undersigned Attorney for Applicant at the Examiner's convenience.

Although Applicant believes no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to **Deposit Account No. 20-0668 of Texas Instruments.**

Respectfully submitted,

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